

Claims

1. Combustion bowl (4, 4', 12, 16, 18-22) in the crown (1, 13) of a piston (2, 2', 14) for a diesel engine,
 - having a ring-shaped cooling channel (9) disposed in the radially outer edge region of the piston (2, 2', 14) on the piston crown side,
 - whereby the combustion bowl (4, 12, 16, 18-22) is disposed outside of the center relative to the longitudinal piston axis (3),

characterized in that

 - an undercut (8, 8', 38) is formed into at least a part of the radially outer edge region of the combustion bowl (4, 12, 16, 18-22), to such an extent that the entire radially outer edge region of the combustion bowl (4, 12, 16, 18-22) is disposed sufficiently close to the cooling channel (9) for a cooling effect of the cooling channel (9) on the combustion bowl (4, 12, 16, 18-22).
2. Combustion bowl (4, 12, 16, 18-22) according to claim 1,

characterized by a circle-shaped bowl neck (5, 26).

3. Combustion bowl (4') according to claim 1, **characterized by** an ovally shaped bowl neck (11).
4. Combustion bowl according to one of the preceding claims, **characterized in that** a molded-on part (17) configured in hump-like manner is disposed in the center of the crown of the combustion bowl (16).
5. Combustion bowl (12, 16, 20, 21, 22) according to one of the preceding claims, **characterized by** at least one radially outer edge region with undercut and at least one radially outer edge region (15, 25, 25', 29, 33) without undercut.
6. Combustion bowl (18 to 20) according to one of the preceding claims, **characterized by** two regions (23, 24, 27, 28) shaped essentially like a circle segment, which lie opposite one another.
7. Combustion bowl (21, 22) according to claim 1-7, **characterized by** more than two regions (30-32, 34-36) shaped like a circle segment.

8. Combustion bowl (18-22) according to claim 6 or 7, **characterized in that** the regions (23, 24, 27, 28, 30-32, 34-36) shaped like a circle segment are machined with a transition into one another.
9. Combustion bowl (4, 12, 16, 18-22) according to one of the preceding claims, **characterized in that** fuel is injected into the combustion bowl (4, 12, 16, 18-22) by way of injection nozzles, the bores of which are dimensioned and disposed in such a manner that the width and the orientation of the fuel jets are adapted to the local expanses of the related bowl regions.